SYNERGISTIC SOFTWARE

MAILING LIST DATABASE
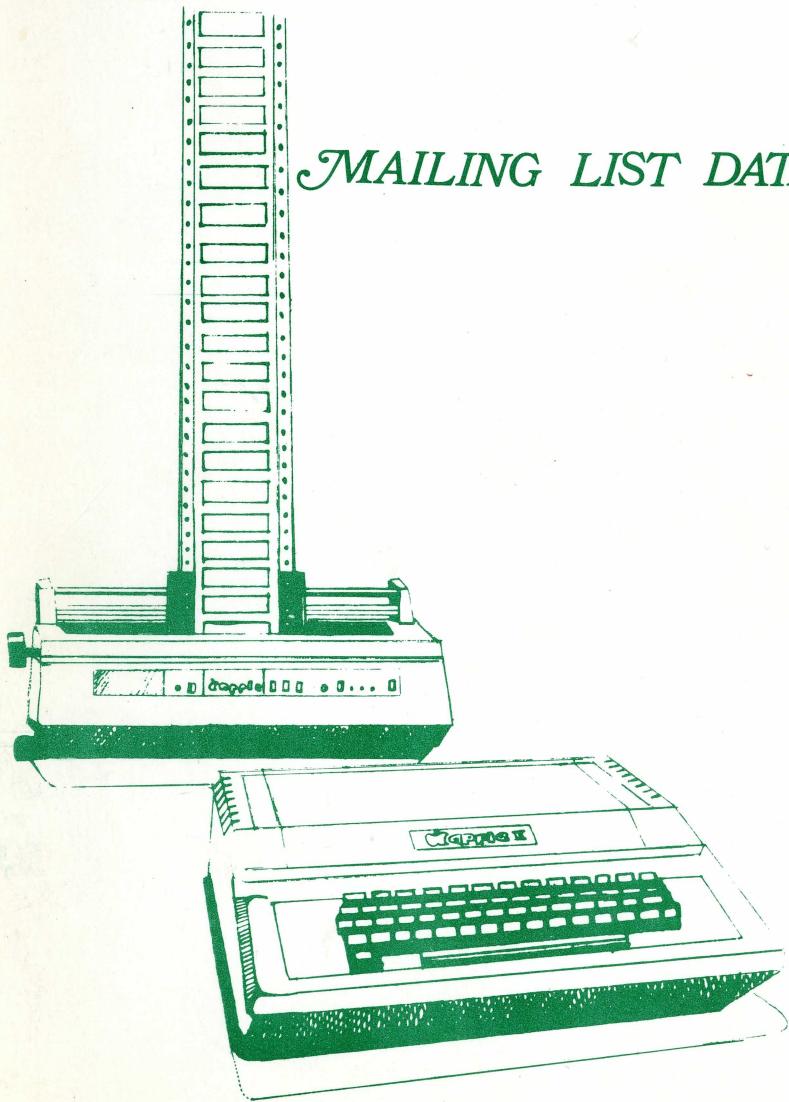
```
┌─────────────────CAUTION─────────────────┐
│                                          │
│   It is strongly recommended that you retain │
│   backup copies of all mailing list files. Files │
│   can be deleted by command using this pro-  │
│   gram.  Once deleted, they cannot be recov- │
│   ered.  Synergistic Software cannot assume  │
│   any responsibility for data lost.  It is further │
│   recommended that no modifications beyond   │
│   those described herein be made.  Again, no │
│   liability can be presumed if the program is │
│   so modified.                           │
│                                          │
│                 CAUTION                  │
└──────────────────────────────────────────┘
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A. INTRODUCTION

Mailing List Database is a user oriented mailing list program which allows entry and storage of a list of names with their associated addresses, cities, states, zip codes, phone numbers, comments, and code designations. New records can be added or old ones modified or deleted at any time. Multiple lists can be stored on one or two disk drives. Single and multiple field sorts can be performed at any time on any field. A search for contents of any or all records can be printed.

The program utilizes extremely fast machine language routines for all sorts, searches, and record manipulation, allowing very rapid record access. Up to 225 records can be loaded on line at any time. These routines utilize page 3 memory locations $320 through $350. This may conflict with some printer driver routines which should be relocated accordingly.

Each of the included programs have been as thoroughly tested and debugged as possible. Should any problems occur other than those indicated herein, they should be reported to us in writing, so that corrective action may be taken if required. Synergistic Software disclaims any responsibility for loss or damage to your data, programs, or equipment through the use of any program furnished on this diskette. We further suggest that no modifications other than those described herein be made to any to the programs.

Mailing List Database requires a 48K Apple computer, at least one disk drive, and Applesoft ROM or the Language Card. The programs provided on the disk are described below in Table 1.

Table 1
PROGRAMS ON MAILING LIST DATABASE DISK

TYPE	NAME	PURPOSE
A	HELLO	Greeting program
A	MAIL LIST DATABASE	Basic program
A	CONVERTER	Text file conversion program
B	MLFILES	Machine Language routines*

* Loads starting at hex location $9600
(decimal = 38400)and is hex $41D bytes long (decimal = 1053).

B. USING THE PROGRAM

When the Mailing List Database program is run, the menu shown below in Figure 1 is displayed. Pressing the number shown next to any given option will cause that activity to be initiated. Each option will be described in detail below. At any time, during any user input, the ESC key can be pressed to return to the Main Menu, thus aborting an undesired sequence.

1. START A NEW FILE

When Option No. 1 is selected, the user is allowed to start a new working data file. This will cause all records currently in memory to be erased. (A warning message to this effect appears when '1' is pressed, allowing cancellation of the command. This prevents accidental erasure.) A file name is selected and record entry can begin. It is not necessary to start a file in order to begin entering re-

FIGURE 1

```
┌─────────────────────────────────────────────────────┐
│                     MAIN MENU                         │
│                                                       │
│     1.   START A NEW FILE                             │
│     2.   ENTER RECORDS                                │
│     3.   LIST                                         │
│     4.   EDIT                                         │
│     5.   SEARCH                                       │
│     6.   SORT                                         │
│     7.   DISK ACCESS                                  │
│     8.   PRINT LABELS                                 │
│     9.   TERMINATE                                    │
│     WHICH?                  RECORDS IN FILE   XX       │
│                             CURRENT FILE IS XXXXX     │
└─────────────────────────────────────────────────────┘
```

cords. A file may be started with the 'Enter Records' option (see No. 2 below) and the file name selected when saving the file to disk (see Disk Access, No. 7, below). Option No. 1 is only required when it is desirable to erase all records of the current working file from memory.

2. ENTER RECORDS

Option No. 2, Enter Records, allows the entry of 1 to 225 records. When Option No. 2 is selected, a blank record (see Figure 2) is displayed. The user is prompted with the name of each field. Maximum field length is indicated by a bar of inverse spaces over which the field contents are typed. During data entry for each field, the user can make any of four possible inputs. (1) Pressing ESC will immediately return control to the Main Menu. The currently

FIGURE 2
RECORD FORMAT

FIRST NAME	LAST NAME	
(15 characters)	(20 characters)	
STREET		
(26 characters)		
CITY	STATE	ZIP
(17 characters)	(4 characters)	(5 characters)
PHONE NUMBER	COMMENT*	CODE*
(12 characters)	(20 characters)	(4 characters)

* These two fields may be used to store any additional data concerning this record.

displayed record will not be saved. (2) Pressing return will enter blanks into the field being prompted. (3) Pressing ':' will enter the contents of the same field of the previous record (i.e. if you are repeatedly entering WA into the state field, merely press the colon when prompted). (4) Any other characters typed will be placed in the appropriate field when field entry is terminated by pressing return.

After all fields of a record have been entered, the user is given the options listed in Table 2. (1) RETURN continues record entry with the next record. (2) ESC returns to the Main Menu. The current record is saved. (3) 'E' allows editing of the current record (see Edit No. 4, below). (4) 'D' will delete the current record. (5) 'P' will print a label using the data of the current record (see Print Label, No. 8, below).

225 records can be on-line at any one time. When the current working file is full, the user must save it to disk and start a new file.

TABLE 2

OPTIONS DURING RECORD DISPLAY

```
RET = CONTINUE
ESC = RTN TO MENU
  E = EDIT
  D = DELETE
  P = PRINT LABEL
```

3. LIST

The list records option, No. 3, will display records for review beginning at any desired record number. After selecting option No. 3, the user will be asked for a starting record number. The user is then given 3 listing options: (1) Quick List prints the last name, first name, and record number to the screen in a continuous listing. Pressing ESC will stop the listing. Pressing return continues it while a second ESC returns to the Main Menu. (2) Full List displays full records to the screen. Four records are displayed for viewing at a time. Pressing return displays the next four. (3) FULL LIST TO PRINTER does a continuous full record listing to your printer. As with Quick List, ESC acts as a pause, a second ESC returns control to the Main Menu while a return continues the listing.

4. EDIT

Selecting option No. 4, Edit, allows changes to be made in any data already on file. When the record edit mode is selected, the user is asked which one record number he wants displayed. The record selected is displayed with headers. The user may select to alter any field shown in Figure 2. If 'E' is pressed to edit the current record, numbers are displayed above each field's header. The user selects which field number is to be edited. The current contents of that field are displayed and may be changed, added to, or deleted. The user is then given the options in Table 2.

Selecting 'D' for delete will warn the user that the currently displayed record will be deleted from the working file. The user will be asked for verification. If verification is given, the record is removed. The next record will then be displayed.

Selecting Edit or Delete while in other modes operates exactly in the manner described above.

5. SEARCH

The Search option, option No. 5, causes the computer to find any/all specified records. The user first selects one of three search options: search for a substring, search for one field, or search for two fields (see below). He is then prompted to specify (as in Edit Mode above) which field or fields will be searched. Once each field is selected, the user is asked for the search key (field contents to be searched for). The program then displays all records that contain the specified search key(s).

The three modes operate as follows.

(1) Search for a substring, - This mode allows the user to search any field using a substring of the field contents as the search key. For example, searching the last name field for the substring 'SAND' will find all records with the last name of SANDERS, STREISAND, etc.

(2) Search for one field - For this mode, the only records found will be those that begin with the exact contents of the search key. Here searching for 'SAND' will display only records with last names beginning with 'SAND' (e.g. SANDERS, SANDWICH, etc.) but not records with 'SAND' imbedded such as STREISAND, etc.

(3) Search for two fields - Here the only records to be found will be those in which the contents of both specified fields match their respective search keys. Two fields should only be used if, for example, one wants to find records with the last name 'SAND' who live in Texas.

In each of the search modes described above, each record found is individually displayed. The user may elect to perform any option of Table 2 when the record is displayed. Pressing return allows display of the next record found.

The Search routines are written in machine language and require less than one second to find an occurrence of the search key in the current working file.

6. SORT

To order records alphanumerically on any given field, the Sort option, option No. 6, is selected. The user is presented with three sort modes: sort on one field, two fields, or three fields. The one field sort provides a simple alphanumeric sort on any field. The sort field is selected as in Edit mode described above.

Multiple field sorts will sort first on the first field selected, then sort that field by subsequent fields. The user may, for example, sort his list by state or zip code, then by last name (maintaining zip code order), then by first name. The result would be as illustrated in Table 3 below.

Sorting the records reassigns all record numbers. After a sort has been completed, the records may be viewed (List option), printed (Print Label option), or saved to disk (Disk Access option). The SORT routines are written in machine language and operate very quickly. In the worst case, a sort should not require more than 65 seconds.

7. DISK ACCESS

The Disk Access option, option No. 7, allows files to be loaded, saved, or deleted. The disk catalog of either disk may also be displayed. The user is first asked which disk drive should be accessed. The program next

TABLE 3
THREE FIELD SORT EXAMPLE

```
FIRST SORT FIELD = STATE
SECOND SORT FIELD = LAST NAME
THIRD SORT FIELD = FIRST NAME
```

STATE	LAST NAME	FIRST NAME
ALASKA	ANDERSON	JOHN
ALASKA	POWELL	BILL
ARKANSAS	ANDERSON	FRED
NEW YORK	ANDERSON	ALICE
NEW YORK	CARLSON	JOHN
NEW YORK	CARLSON	MARK
NEW YORK	JONES	ALICE
NEW YORK	THOMPSON	FRED
TEXAS	YOUNG	JILL
WYOMING	ANDERSON	JIM

prompts whether a file is to be loaded, saved, or deleted. The user is then asked for a file name. If the file name is not known, pressing return will display the catalog of the selected disk drive, and the user is again asked for a file name. Pressing ':' will utilize the current working file name. As before, pressing ESC will return to the Main Menu.

Selecting the Save option allows the user to save backup copies of his record files to either disk at any time. Selecting the Load option when the current working file has been modified will produce a warning that the modified file will be lost, and the user will be asked if he wishes to save the file first. The Delete option also produces a warning before execution to prevent accidental loss of data. Selecting Catalog simply displays the catalog of the appropriate disk.

8. PRINT LABELS

The Print Label option, option No. 8, may be used to print copies of the name, address, city, state, and zip code in mailing label format for any/all records specified. An optional field (phone number, comment, or code) may also be printed if desired. When option 8 is selected, the user is first asked how many copies are desired, then whether the additional field should be printed.

The user must then specify print mode. There are four options available:
(1) Print all records starting at record number one.
(2) Print records starting at a specified number.
(3) Print one record.
(4) Print selected records.

The fourth option allows the user to specify that only records with specific contents in one or two fields will be printed. The program will prompt the user to select these contents. Examples might include printing labels of only those from Portland, Oregon or printing only those in California with code 'A-1'. As currently programmed, the printout will skip three lines between label outputs. If the user requires a different spacing, the SK% in line 0 should be changed to reflect the number of spaces desired.

The printout may be halted at any time by pressing ESC. Once halted, a return will cause printout to resume, while a second ESC will return to the Main Menu, aborting the printout. The program, as written, assumes I/O port number 2 to be the printer interface. If you use another port, or require a printer driver routine, modify line number 0 accordingly. (Change SL% = 2 to SL% = X).

The program will produce mailing labels in single columns only. If 2, 3, 4, or more adjacent labels are desired, change the variable NL% in line 0 to the number desired.

Printer-driver routines will also require a BLOAD file name. It is recommended that line 0 be modified for this purpose.

9. TERMINATE

As in the Disk Access option, Delete mode, selecting option No. 9, Terminate, will produce a warning if a modified working file has not been saved. If the warning is ignored, any unsaved records may be lost. If termination has occured, the program can be reentered with all records intact by typing 'GOTO 107' and pressing return.

C. CONVERTING PRIOR MAILING LISTS

A utility program called Converter is provided on the disk. This program will load records from a prior text file based mailing list (such as APMAIL), convert them to the binary file format utilized by the Mailing List Database program, and store the new binary file on your working disk. The record format employed by the APMAIL program is assumed. This format is illustrated in Table 4 below. If the fields of your text file records are ordered as in Table 4, merely run Converter. The user must input the file name of the text file and the desired name of the binary file being created. The text file must be in Disk Drive 2 and the new file in Disk Drive 1. The program does the rest.

If field order is different from that specified below, line 140 of the Converter must be modified. Reorder the string inputs to match the field order of your text files.

TABLE 4
TEXT FILES FORMAT

FIELD	CONTENTS	VARIABLE
1	First Name	FIR$
2	Last Name	N$
3	Optional	E$
4	Address	A$
5	City	C$
6	State	S$
7	Zip Code	Z$
8	Phone Number	P$
9	Comment	DA$
10	Code	DX$

D. ERROR CODES

The potential operational errors that may occur are described below in Table 5. Probable causes and corrections are also provided. When an error occurs, the appropriate code is displayed on the screen and program operation halts until the user presses return. Program control then returns to Main Menu.

****

PLEASE MAKE A BACKUP COPY OF THE MASTER DISK AND USE YOUR BACKUP COPY.

PLEASE   BACKUP   YOUR   RECORD   DISKS   FOR   YOUR   OWN   PROTECTION!!!!!!
****

The Mailing List Database Program allows a maximum of 215 records per file. The program disk will hold up to 645 records (3 full files or any number of files totalling 645 records). A blank diskette containing only records will contain 852 records. For this reason, it is recommended that large data files be stored on data disks only, rather than on the program disk.

Further, if you have groups of records that contain more than 225 records, you may want to set up alphabetic break points so that the first file holds names from 'a' to 'm' and the second file holds names from 'n' to 'z'. The user can also remove disk #1 or #2 and insert additional disks at any time for added storage space. In this regard, it should be noted that it is not necessary to have the program disk in drive #1 after you have the program running.

Reference Page 7, Section 8, PRINT LABELS:

To list line zero (0) for modification, you will need to type 'list 0,1'. If you list line zero by itself, the entire program will list.

NEW PROGRAM FEATURES

Several major changes to this program have been incorporated since its initial release. The SEARCH and PRINT routines can now operate on all files of either or both disks with a single command. The sections below will describe the changes in greater detail.

A second change concerns the record format illustrated in figure 2. The format is now sequential to allow easier reading and more convenient editing.

A third change has been the addition of a roster output as an option. This option will print each record on a single line. Since this requires a 128 character line length, some printers will not be able to print the records properly. For this reason, the program does not allow this output as currently written. If you desire roster output, modify line 70 of the program to read:

        70 M% = 1: IF D% = 3 THEN 300

With this change, whenever the user selects the list to printer option, he will get a roster output. Without changing line 70, the list to printer option will produce an output requiring no more than 40 characters per line. It will be five (5) lines long per record, however.

The last major change is the incorporation of a second Mailing List Database Program on the diskette. This program , denoted by the 2.1 following its title on the diskette, allows for free field formatting of the records. Instead of fixed length name, address, city, etc. fields, the user is provided with a five line label (the first 4 fields are 25 characters and the last is 10 chars. long). Two additional fields are provided for record coding and keying. With this format, the user can enter abnormally long addresses, foreign addresses, long zip codes, company names plus individual names, etc. try entering one or two records into each program before you decide which one you wish to use.

The print labels option of Mailing List Database Version 2.1 will print the contents of the first 4 fields automatically. Any of the other fields may be added to the label at the user's option. The program will ask whenther or not an additional field should be included in the label output.

NOTE: With the additional features provided by both version 2.0 and 2.1 of the Mailing List Database, there is room on-line for 215 records. If the user is converting files from the previously released version 1.0 of this program, he should be certain that the files contain no more than 215 records as the extra records will be lost.

4. SEARCH

The Search option, option #4, causes the computer to find any/all specified records. The user first selects a search range. The search range can be: (1) the current working file; (2) all files on disk 1; (3) all files on disk 2; or (4) all files on both disks. If other than the current working file are to be included in the search (i.e. ranges 2, 3, and 4), the current working file will be lost. Therefore, if the current file includes any modified records, it should be saved before the search is initiated. A warning will be provided if the file has been modified and not yet saved.

Once the search range has been specified, the user selects one of three search options: (1) search for a substring; (2) search for one field; or (3) search for two fields (see below). He is then prompted to specify (as in Edit mode above) which field or fields will be searched. Once each field is selected, the user is asked for the search key (field contents to be searched for). The program then displays all records that contain the specified search key(s).

The three modes operate as follows.

(1) Search for a substring - This mode allows the user to search any field using a substring of the field contents as the search key. For example, searching the last name field for the substring "SAND" will find all records with the last name of SANDERS, STREISAND, etc.

(2) Search for one field - For this mode, the only records found will be those that begin with the exact contents of the search key. Here searching for "SAND" will display only records with last names beginning with "SAND" (e.g. SANDERS, SANDWICH, etc.) and not records with "SAND" imbedded (such as STREI- SAND).

(3) Search for two fields - Here the only records to be found will be those in which the contents of both specified fields match their respective search keys.

Two fields should only be used if, for example, one wants to find records with the last name "SAND" who live in Texas.

In each of the search modes described above, each record found is individ- ually displayed. The user may elect to perform any option of Table 2 when the record is displayed. Pressing return allows display of the next record found.

The Search routines are written in machine language and require less than one second to find an occurrence of the search key in the current working file.

NOTE: During the search option which includes label printing of the results, it is not possible to get multiple adjacent labels printed. This feature is only available when printing all labels of a file.

7. PRINT

The Print option, option #7, may be used to print any or all records. The user must specify the desired print mode. There are six options available:

(1)   Print 1 record

(2)   Print starting at ...

(3)   Print all records in current file

(4)   Print all records on disk 1

(5)   Print all records on disk 2

(6)   Print all records on both disks.

When choice #1, print 1 record, is selected, the user will be asked which record of the current working file should be printed. It will be printed, and control returns to the Main Menu. If choice #2 is selected, the user is asked for the record number of the first record of the current working file to be printed. the program prints that record and all subsequent records in the cur- rent working file until the last record is printed or the printout is halted by pressing ESC. Selecting choice #3 simply causes all records in the current working file to be printed. After the last record has been printed, control returns to the Main Menu.

Choices #4, #5, and #6 will print all of the records in all files on the specified disks. It should be noted that other data files will be loaded for printout. If the current working file has been modified, it should be saved prior to selecting choices #4, #5, or #6. A warning to this effect is provided if the current working file has been modified and not yet saved.

All print modes (except printing a single record) have the capability of halting the printout at any time by pressing ESC. Once halted, a return will cause the printout to resume, while a second ESC will return to the Main Menu, aborting the printout.